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EXAMINER

TO, JENNIFER N

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,707

Applicant(s)

GULICK, DALE E.

Examiner

Jennifer N. To

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-11, 13-18 and 20-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 22-28 is/are allowed.
6) ☒ Claim(s) 1-4, 6-11, 13-18, 20 and 21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-4, 6-11, 13-18, and 20-28 are pending for examination.
2. Claims 22-28 are allowed.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 8-11, and 13-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. Claims 8-11, and 13-14 are rejected under 35 U.S.C. 101 because the claimed invention are directed to apparatus claims, but appearing to be comprised of software alone without claiming associated computer hardware required for execution, is not supported by either a specific and substantial asserted utility (i.e., transformation of data) or a well established utility (i.e., a practical application).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter in which the applicant regards as his invention.

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7. Claims 8-11, and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The claim language in the following claims is not clearly understood:

i. as per claim 8, lines 7-8, it is uncertain what is meant by "executing in response to the at least one task other than the task picker completion execution" (i.e. executing the at least one task or the task picker). Lines 8-9, it is uncertain what is meant by "continuing executing until a pre-selected events occurs" (i.e. continuing execution the at least one task or the task picker). For the purpose of examination examiner interpreted the claim limitation as executing the task picker and continue executing the task picker until a pre-selected event occurs.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4, 6-11, 13-15, 18, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sand et al. (hereafter Sand) (U.S. Patent No. 6148322).

10. Sand was cited in the previous office action.

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11. As per claim 1, Sand teaches the invention substantially as claim including a computer implemented method, comprising:

a list stored one or more tasks (fig. 2; col. 3, lines 45-48), wherein each task has an associated exit routine (abstract; lines 7-9, when the terminating condition is met the task is terminated is the exit routine);

determining at least one task to process based on a priority scheme (abstract; col. 2, lines 8-16; col. 3, lines 56-65);

processing the at least one task (abstract; col. 2, line 16; col. 3, lines 56-65); and calling the exit routine based on determining that the task has not completed processing within a pre-selected period of time (abstract; col. 2, lines 16-27; col. 4, lines 41-47).

12. Sand did not specifically teach the step of storing one or more tasks in a queue.

13. However, Sand disclosed a list that stored one or more tasks. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that Sand's list is the same as the invention queue, and also there is should be a step of storing one or more tasks in the list since Sand's list stored one or more tasks. Therefore, one would be motivated to utilize Sand' system for coordinating the execution of multiple tasks (Sand, abstract).

14. As per claim 4, Sand teaches that wherein determining at least one task to process based on the priority scheme comprises determining the at least one task

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based on a first-in, first-out priority scheme (abstract; col. 2, lines 8-16; col. 3, lines 45-48, 56-65). In addition, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that tasks stored in the queue will be process by first-in first-out.

15. As per claim 6, Sand teaches that wherein calling the exit routine comprises terminating the task currently processing and returning control to a task picker in the queue (col. 3, line 55. through col. 4, line 7).

16. As per claim 7, Sand teaches that wherein processing the at least one task comprises executing the task and programming a timer to generate an interrupt after a pre-selected time, wherein the pre-selected time corresponds to the amount of time required for the task to complete executing (col. 3, lines 30-40; col. 4, lines 8-54).

17. As per claim 8, Sand teaches the invention substantially as claim including a computing apparatus, comprising:

a queue having a task picker stored therein (fig. 2; col. 3, lines 45-48, a list stored one or more tasks, the task picker here referred as cyclically repeated task), the task picker being configured to:

determining if at least one task other than the task picker is stored in the queue (col. 3, lines 56-67; col. 4, lines 1-7); and

execute the task picker in response to executing the at least one task other than the task picker is completing and continue executing the task picker until a pre-selected event occurs (col. 4, lines 4-7).

18. Sand did not specifically teach the step of transfer control to the at least one task other than the task picker based on determining that the at least one task other than the task picker is stored in the queue so that the at least one task other than the task picker can execute.

19. However, Sand disclosed that the task picker will executing as long as no task is awaiting (col. 4, lines 4-7).

20. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that since the task picker will not be executed until all the tasks are executed, hence the task picker would have transfer the control to the other task in the queue to execute if there is any. For example, if the task picker is next on the line to be executed, but there is another task other than the task picker listed in the queue after the task picker. According to Sand' system, the task picker can't not executed until all tasks in the queue is executed. Hence, in this case the task picker would have to transfer the control to the other task to execute to meet the requirement of Sand's system. Therefore, one would be motivated to utilize Sand'

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system for coordinating the execution of multiple tasks to ensures all tasks are executed in timely fashion (Sand, col. 1, lines 16-18).

21. As per claim 9, Sand teaches that wherein the pre-selected event comprises detection of an interrupt (col. 5, lines 6-15).

22. As per claim 10, Sand teaches that wherein the pre-selected event comprises detection of another task being present in the queue (col. 4, lines 25-29).

23. As per claim 11, Sand teaches that wherein each task stored in the queue comprises an exit routine to terminate that task (abstract; lines 7-9, the terminating condition is the exit routine).

24. As per claim 13, it is rejected for the same reason as claim 8. In addition, Sand teaches that wherein the task picker selects a task to execute from the one or more tasks based on a priority scheme (abstract; col. 2, lines 8-16; col. 3, line 56 through col. 4, lines 1-30).

25. As per claim 14, Sand teaches that wherein the priority scheme is a first-in, first-out scheme (abstract; col. 2, lines 8-16; col. 3, lines 45-48, 56-65). In addition, it would have been obvious to one of an ordinary skill in the art at the time the invention was

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made to have recognized that tasks stored in the queue will be process by first-in first-out.

26. As per claims 15, 18, and 20-21, they are rejected for the same reason as claims 1, 4, and 6-7 above.

27. Claims 2-3, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sand et al. (hereafter Sand) (U.S. Patent No. 6148322), as applied in claims 1, 15 above, and in view of Fletcher et a. (hereafter Fletcher) (U.S. Patent No. 5012409).

28. Fletcher was cited in the previous office action.

29. As per claim 2, sand teaches the invention substantially as claimed in claim 1. Sand did not specifically teach that storing at least one task in the queue at every pre-selected time interval.

30. However, Fletcher teaches that storing at least one task in the queue at every pre-selected time interval (col. 4, lines 29-33, 46-49; col. 5, lines 27-34).

31. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Sand and Fletcher, because

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Fletcher teaching of storing at least one task in the queue at every pre-selected time interval would improve the integrity of Sand's system by controlling execution of all tasks based on priority and resource availability at each pre-selected time interval.

32. As per claim 3, Sand teaches the invention substantially as claimed in claim 1. Sand did not specifically teach generating an interrupt and storing one or more tasks in the queue in response to detecting the interrupt.

33. However, Fletcher teaches generating an interrupt and storing one or more tasks in the queue in response to detecting the interrupt (col. 4, lines 29-33, 46-49; col. 5, lines 27-34).

34. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Sand and Fletcher, because Fletcher teaching of generating an interrupt and storing one or more tasks in the queue in response to detecting the interrupt would improve the integrity of Sand's system by controlling execution of all tasks based on priority and resource availability at each pre-selected time interval.

35. As per claims 16-17, they are rejected for the same reason as claims 2-3 above.

Response to Arguments

36. Applicant's arguments filed 10/20/2006 have been fully considered but they are not persuasive.

37. In the remarks applicant argued:

(1) Claims 8-11, and 13-14 are directed to statutory subject matter.

(2) Sand fails to teach each task has an associated exit routine.

(3) Sand fails to teach a task picker selects tasks that may be performed.

38. Examiner respectfully traverses Applicant's remarks:

a. as to point (1), claims 8-11, and 13-14 claimed an apparatus comprises software per se. By definition, software per se is not a process, machine, manufacture, or composition of matter. Hence, software per se is not statutory. Therefore, claims 8-11, and 13-14 are direct to a non-statutory subject matter because the claims direct to an apparatus but appeared to be software alone without claiming associated computer hardware.

b. as to point (2), Sand teaches each task has an associated exit routine (abstract; lines 7-9, the terminating condition is the exit point, and the process that the terminating condition is satisfied, the task is terminated based on that is an exit routine). According to Sand, an executing task is terminated once the terminating condition of that task is satisfied (abstract, lines 7-9). In addition, the claim-language did not clearly describe what is an exit routine or an exit routine

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indicated how the task is to be terminated (as applicant remarked on page 12, lines 17-18), examiner interpreted the claim limitation broadest reasonable as it would be understood by one of ordinary skill in the art (an exit routine by definition is a condition/exit point with allowing task to be terminated based on one or more conditions). Therefore Sand's terminating condition is the exit point by which the task is terminated based on the exit point when the terminating condition is satisfied is functionally equivalent as the exit routine of the claim.

c. as to point (3), Sand teaches the task picker (the cyclically-repeated task). Sand disclosed that the cyclically-repeated task will be executed as long as no tasks are in the queue (col. 4, lines 4-7). Sand did not specifically teach the cyclically-repeated task selected the tasks that may be performed nor the claimed invention. The claim recited that the task picker make sure that no task other than the task picker in the queue before it executes is functionally equivalent with Sand's system that the cyclically-repeated task will be executed as long as no tasks are in the queue. Thus, Sand teaches the task picker. In addition see paragraphs 17-10 of the rejection for further details.

Conclusion

39. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

40. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is (571) 272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM, F 6AM- 2:30 PM.

41. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

42. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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